CLAIMS

1. A data processing system comprising:

at least one resource manager (**RM**) for managing changes to respective system resources in accordance to a commit/backout protocol, and

a resource manager coordinator (**RMC**) for coordinating commit/backout activities of the at least one resource manager,

characterised by comprising

at least one process resource manager (**ERM**), working in accordance to a commit/backout protocol, for managing the execution and the compensation of non-compliant processes not complying to the commit/backout protocol due the access to non compliant resources or invoked by a non compliant protocol,

compensation services of the at least one process resource manager (**ERM**) being coordinated by the resource manager coordinator according to the commit/backout protocol, the at least one process resource manager (**ERM**) automatically determining, upon receipt of a backout request, a sequence of compensation actions to be performed so as to backout actions performed during the execution of the non-compliant processes, and managing the execution of said compensation actions.

2. The data processing system according to claim 1, in which said sequence of compensation actions consists in a sequence of inverse actions, each inverse action being the inverse of a respective action performed during the execution of the non-compliant processes.

3. The data processing system according to claim 1, in which upon receipt of a backout request, the compensation actions are performed in parallel to the backout activity of the resource managers, coordinated by the resource manager coordinator.

4. The data processing system according to claim 1, in which upon receipt of a backout request, the compensation actions are postponed with respect to the backout activity of the resource managers.

5. The data processing system according to claim 1, in which the process resource manager manages the execution of the non-compliant processes and of the compensation actions by means of at least one task, associated with either one unit of work or a plurality of correlated unit of works.

6. The data processing system according to claim 1, comprising an information recording service (**LOG**) for recording information concerning the actions performed during the execution of at least the non-compliant processes, the process resource manager automatically determining the sequence of compensation actions on the basis of the information recorded by the information recording service.

7. The data processing system according to claim 6, in which said sequence of compensation actions brings the data processing system into one among a first system state, corresponding to an initial state of the system prior to the actions performed by the non-compliant processes, and a second system state different from the initial system state, said second system state being determined by the process resource manager on the basis of the information recorded by the information recording service.

8. The data processing system according to claim 7, comprising a process classification service (**CATS,CAT,BRM**) for classifying the processes to be executed and determining if a process is a non-compliant process.

9. The data processing system according to claim 8, in which the classification service comprises a process catalog (**CAT**) providing a catalog of process types and, for the process types in the catalog, information for enabling the process resource manager automatically determining the sequence of compensation actions on the basis of the recorded information.

10. The data processing system according to claim 9, in which said process types include a first process type for which, upon receipt of a backout request, the process resource manager does not directly activate the sequence of compensation actions, but waits for a successive re-launch of the process.

11. The data processing system according to claim 6, comprising a process recovery service (**TSR**) implementing a process recovery procedure for managing backout requests issued during the execution of a process.

12. The data processing system according to claim 6, comprising an error recovery service (**ERR**) implementing an error recovery procedure for managing error conditions occurring during the execution of a process.

13. The data processing system according to claim 12, in which the error recovery procedure depends on the information provided by the information recording service.

14. The data processing system according to claim 13, in which the error recovery procedure comprises performing the process recovery procedure.

15. The data processing system according to claim 1, in which the non-compliant processes comprises at least one among a processes running on at least one distinct data processing system (**C-SYS1,C-SYS2**) and processes running on the data

processing system but not complying with the commit/backout protocol.

16. The data processing system according to claim 15, comprising a system recovery service (**SYSR**) implementing a system recovery procedure for establishing a synchronic point between the data processing system and the at least one distinct data processing system.

17. The data processing system according to claim 16, in which the system recovery procedure is invoked by the process resource manager.

18. The data processing system according to claim 17, in which the system recovery procedure is invoked at the startup of the data processing system.

19. The data processing system according to claim 16, in which the system recovery procedure includes a negotiation phase between the data processing system and the at least one distinct data processing system, said negotiation phase comprising negotiating identification information of the processes directed to the distinct data processing system.

20. The data processing system according to claim 15, comprising a connectivity service (**CNCT**) exploited by the process resource manager for managing communication between the data processing system and the at least one distinct data processing system.

21. The data processing system according to claim 1, comprising a service for managing the automatic re-execution of processes.

22. The data processing system according to any one of the preceding claims, comprising a transaction manager system (**TM**) for managing transactions.

23. A data processing system for managing transactions, the system comprising:

a first transaction management system, comprising:

a plurality of resource managers, each one responsible of managing respective system resources according to a commit/backout protocol;

characterized by comprising

at least one process resource manager (**ERM**), working in accordance to a commit/backout protocol, for managing the execution and the compensation of non-compliant processes not complying to the commit/backout protocol due the access to non compliant resources or invoked by a non compliant protocol;

compensation services of the at least one process resource manager (**ERM**) being coordinated by the resource manager coordinator according to the commit/backout protocol, the at least one process resource manager (**ERM**) automatically determining, upon receipt of a backout request, a sequence of compensation actions to be performed so as to backout actions performed during the execution of the non-compliant processes, and managing the execution of said compensation actions;

Said compensation services of the at least one process resource manager (**ERM**) being coordinated by the resource manager coordinator in respect to transactions to be carried out by at least one second transaction management system distinct from the first system, the process resource manager managing backout activities of the transactions carried out by the at least one second system.

24. A method of integrating compliant processes complying to a commit/backout protocol with non-compliant processes non complying with the commit/backout protocol, comprising:

providing at least one resource manager (RM) for managing changes to respective system resources in accordance to the commit/backout protocol, and

providing a resource manager coordinator (RMC) for coordinating the commit/backout activities of the at least one resource manager,

characterized by comprising

providing at least one process resource manager (ERM) working in accordance to a commit/backout protocol, for managing the execution and the compensation of non-compliant processes not complying to the commit/backout protocol due the access to non compliant resources or invoked by a non compliant protocol,

the resource manager coordinating the compensation services of the at least one process resource manager (ERM) according to the commit/backout protocol, for managing the execution of the non-compliant processes, the at least one process resource manager (ERM) automatically determining, upon receipt of a backout request, a sequence of compensation actions to be performed so as to backout actions performed during the execution of the non-compliant processes, and managing the execution of said compensation actions.